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Addition of continuous positive airway pressure (CPAP) to pre-hospital treatment of patients with severe dyspnea

A consecutive clinical case series

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was used to test the effect of age on the parameters.

RESULTS: The volume of the calcified cartilage correlated positively with age in women, but not in men. On the other hand, the femoral head volume correlated positively with age in men, but not in women. The subchondral bone plate volume did not correlate with age.

CONCLUSIONS: In this study, we found no increase in the subchondral bone plate volume with age. The two genders differed in the effect of age on calcified cartilage volume and the femoral head. In OA, the calcified cartilage has been suggested to act as a reactivated growth plate leading to endochondral ossification and followed by remodeling of the subchondral bone plate. Our data suggests, that this process might also be linked to femoral head growth in ageing normal individuals. Surprisingly, our data indicate that the process might differ between men and women.

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**Vibe Maria
Laden Nielsen** ADDITION OF CONTINUOUS POSITIVE AIRWAY
PRESSURE (CPAP) TO PRE-HOSPITAL TREATMENT OF
PATIENTS WITH SEVERE DYSPNEA: A CONSECUTIVE
CLINICAL CASE SERIES

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BACKGROUND: Continuous Positive Airway Pressure (CPAP) is a symptomatic treatment used in hospital to reduce respiratory effort. Patients might benefit from earlier initiation of this respiratory support and transfer of CPAP to pre-hospital care is now possible. The aim of this study was to evaluate safety and development in vital signs in patients with severe dyspnea treated with pre-hospital CPAP.

MATERIALS & METHODS: Patients in the region of North Jutland presenting with severe dyspnea and symptoms of either acute cardiopulmonary edema, acute exacerbation of chronic obstructive pulmonary disease or asthma were included consecutively in a case series during a 14 month period. Paramedics administered CPAP (FiO₂ = 1.00) to patients using disposable Flow-Safe IIEZ equipment in addition to standard medical therapy. Data was retrieved from the database amPHI and electronic medical records.

RESULTS: 171 patients were treated with CPAP during transport to hospital (mean treatment time 35 min, SD 18). 60% of patients were men; median age was 73 years (IQR 65–80). Oxygen saturation improved by 12% (95% CI: 11–13.5) and respiratory rate decreased by 8 breaths/min (95% CI: 8–9.5). In 6 cases CPAP was discontinued before arrival at hospital due to an adverse event. One patient needed endotracheal intubation during transport. 45 patients were transferred to an intensive care unit and 24 patients died in hospital.